

ABSTRACT

A permissible range of a restriction object amount,
which is a vertical component of a floor reaction force
5 moment or a component of the floor reaction force moment
in floor surface normal line direction, or a vertical
component of an angular momentum changing rate of the
robot or a component of the angular momentum changing rate
in floor surface normal line direction, is set, and at
10 least a provisional instantaneous value of a desired
motion is input to a dynamic model so as to determine an
instantaneous value of a model restriction object amount
as an output of the dynamic model. An instantaneous value
of a desired motion is determined by correcting the
15 provisional instantaneous value of the desired motion such
that at least the instantaneous value of the model
restriction object amount falls within the permissible
range.